



# ***Air Actuated Hydraulic Bottle Jacks***

## ***Operating Instructions & Parts Manual***

***Model Number***

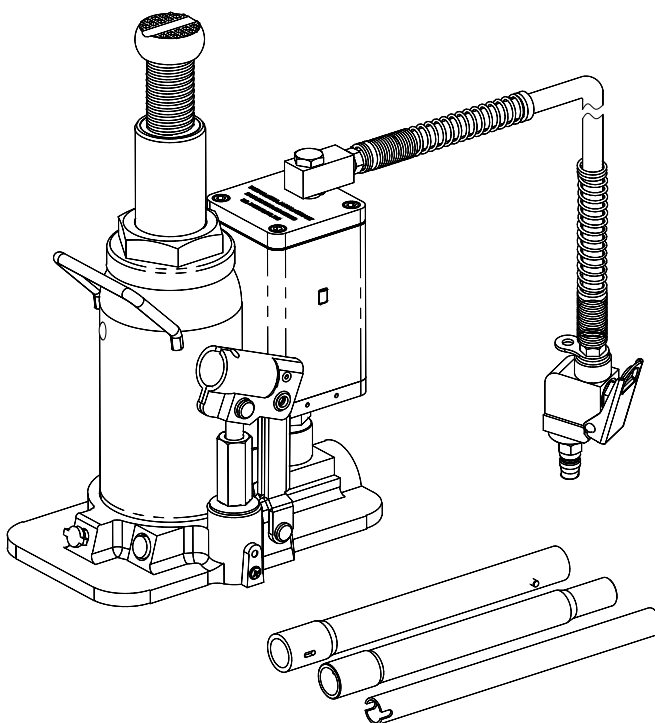
***Atd-7412***

***Atd-7420***

***Capacity***

***12 Ton***

***20 Ton***



**Atd Tools Inc.  
160 Enterprise Drive, Wentzville MO 63385**

Printed in China  
ATD7412-M0 03/07

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**Save these instructions.** For your safety, read, understand, and follow the information provided with and on this jack. The owner and operator of this equipment shall have an understanding of this jack and safe operating procedures before attempting to use. The owner and operator shall be aware that use and repair of this product may require special skills and knowledge. Instructions and safety information shall be conveyed in the operator's native language before use of this jack is authorized. If any doubt exists as to the safe and proper use of this jack, remove from service immediately. **Inspect before each use.** Do not use if broken, bent, cracked, or damaged parts (including labels) are noted. Any jack that appears damaged in any way, operates abnormally or is missing parts, shall be removed from service immediately. If the jack has been or suspected to have been subjected to a shock load (a load dropped suddenly, unexpectedly upon it), immediately discontinue use until jack has been checked by an authorized factory service center. It is recommended that an annual inspection be done by qualified personnel. Labels and Operator's Manuals are available from manufacturer (see Replacement Parts, pages 6 thru 7).

## PRODUCT DESCRIPTION

Atd Tools Air Actuated Hydraulic Bottle Jacks are designed for **lifting**, but not sustaining, loads ranging from up to rated capacity loads. They are designed to be used vertically. After lifting, loads must be **immediately** supported by other appropriate means such as jack stands. Each model is suitable for use in an appropriately rated and designed vertical or bench press structure. These jacks are **not recommended** for use in lifting or positioning construction trailers, houses and/or other building structures. These jacks comply with applicable **ASME / ANSI** Standards. For air actuated use, ensure that your air source can dedicate 7.8 CFM @ 110 - 175PSI to each jack operated. A minimum of 150 PSI air pressure is required to raise rated capacity load.

**DO NOT USE TO DOLLY OR MOVE VEHICLE. DO NOT USE FOR ANY PURPOSE OTHER THAN THOSE USES OUTLINED ABOVE!**

## SPECIFICATIONS

Model	Capacity	Base Size (L x W)	Min. Height	Max. Height	Volume Hyd. Oil	Net Weight
Atd-7412	12 Ton	8 7/8" x 5 3/4"	9 1/2"	18 5/8"	12.2 OZ/ 360 mL	26.7 lb.
Atd-7420	20 Ton	9 1/4" x 6 3/4"	9 1/2"	18 1/4"	16.7 OZ/ 500 mL	36.4 lb.

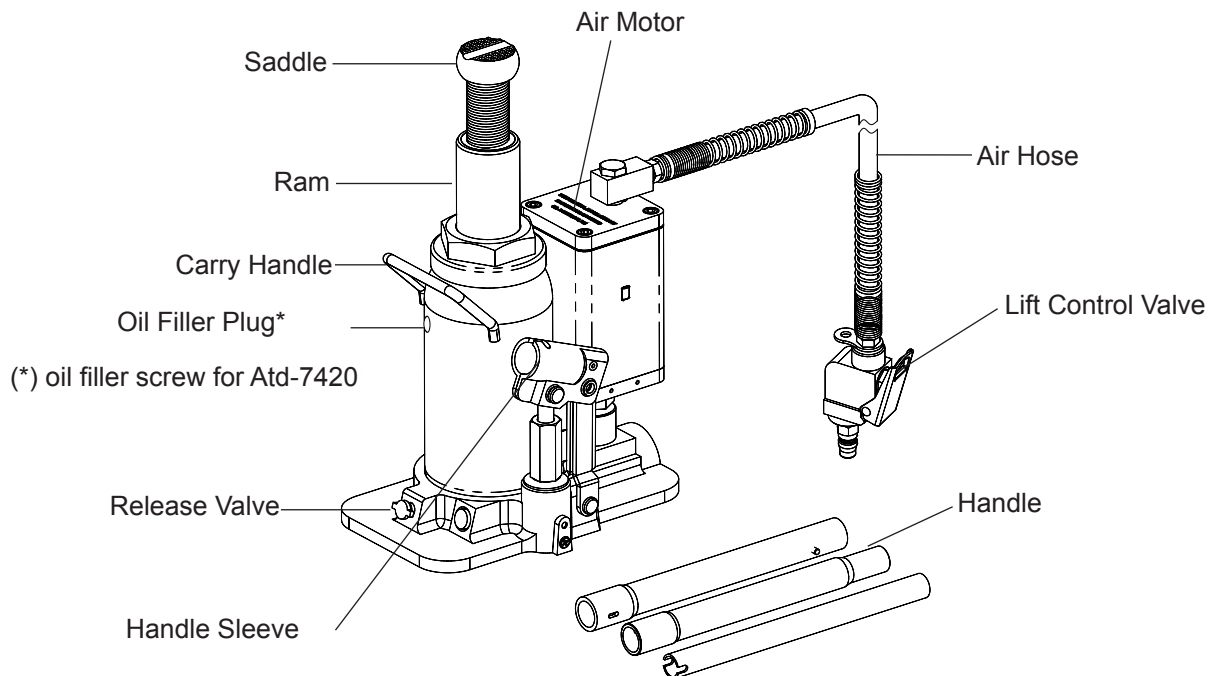


Figure 1 - Typical Air Bottle Jack Nomenclature

## BEFORE USE

1. Verify that the product and the application are compatible, if in doubt call Atd Tools Technical Service (636) 327-9050.
2. Before using this product, read the operator's manual completely and familiarize yourself thoroughly with the product and the hazards associated with its improper use.
3. Assemble handle, ensure spring clips align with slots.
4. With the notched end of the provided handle, engage and open the release valve (counter-clockwise no more than 1/2 turn).
5. With ram fully retracted, locate and remove the oil filler screw/plug. Insert the handle into the handle sleeve, then pump 6 to 8 strokes. This will help release any pressurized air which may be trapped within the reservoir. Ensure the oil level is just below the oil filler screw/plug hole. Reinstall the oil filler screw/plug.
6. Pour a teaspoon of good quality, air tool lubricant into the air supply inlet of the lift control valve. Connect to air supply and operate for 3 seconds to evenly distribute lubricant.
7. Check to ensure that the pump operates smoothly before putting into service. Replace worn or damaged parts and assemblies with Atd authorized replacement parts only.
8. This product is fitted to accept the popular 1/4" NPT air coupler. When installing 1/4" NPT coupler of your choice, ensure that thread tape or compound is used when servicing connections. To ensure dependable, trouble free operation an inline air dryer and oiler is recommended.
9. Inspect before each use. Do not use if bent, broken or cracked components are noted.

### **WARNING**

- Study, understand, and follow all instructions provided with and on this device before use.
- Do not exceed rated capacity.
- Use only on hard, level surfaces capable of sustaining rated capacity loads.
- Lifting device only.
- Immediately after lifting, support the vehicle with appropriately rated jack stands
- Never work on, under or around a load supported by this device only.
- Never wire, clamp or otherwise disable the lift control valve to function by other than operator's hand.
- Lift only on areas of the vehicle as specified by the vehicle manufacturer.
- Do not modify this device.
- Failure to heed these markings may result in personal injury and/or property damage.

## OPERATION

### Lifting

1. Assemble handle, ensure that spring clips align with slots.
2. Secure load with wheel chocks to prevent inadvertent shifting and movement.
3. Place vehicle in the park gear.
4. Position the jack near lift point. Consult vehicle service manual for the location of recommended lift points.
5. Close the release valve by turning it with the notched end of handle clockwise until it is firmly closed.

**⚠ CAUTION:** Use the handle provided with this product or an authorized replacement handle to ensure proper release valve operation. **Do not** use an extender on the air hose or the operating handle.

6. Insert and secure handle into handle sleeve. Pump handle or squeeze the lift control valve until saddle contacts load. To end air operation, simply release the grip on the lift control valve. **DO NOT OPERATE BY AIR AND BY HAND PUMPING AT THE SAME TIME.**
7. Raise load to desired height, then immediately transfer the load to appropriately rated support devices such as jack stands.



### **WARNING**



To avoid crushing and related injuries: **NEVER** work on, under or around a load supported only by jack. **ALWAYS** use adequately rated jack stands.

### Lowering



### **WARNING**

Be sure all tools and personnel are clear before lowering load.

1. Raise load high enough to clear the jack stands, then carefully remove jack stands (**always** used in pairs).
2. Slowly turn the handle counter-clockwise, but no more than 1/2 turn. If the load fails to lower:
  - a. Use another jack to raise the vehicle high enough to reinstall jack stands.
  - b. Remove the affected jack and then the stands.
  - c. Lower the load by turning the release valve counter-clockwise, but no more than 1/2 turn.
3. After removing jack from under the load, push ram and handle sleeve down to reduce exposure to rust and contamination.

## MAINTENANCE

**Important:** Use only a good grade hydraulic jack oil. Avoid mixing different types of fluid and NEVER use brake fluid, turbine oil, transmission fluid, motor oil or glycerin. Improper fluid can cause premature failure of the jack and the potential for sudden and immediate loss of load. We recommend Mobil DTE 13M.

### Adding oil

1. With saddle fully lowered and pump piston fully depressed, set jack in its upright, level position. Remove oil filler screw/plug.
2. Fill with oil until just below the rim of the oil filler screw/plug hole. Reinstall the oil filler screw/plug.

### Changing oil

For best performance and longest life, replace the complete fluid supply at least once per year.

1. With saddle fully lowered and pump piston fully depressed, remove the oil filler screw/plug.
2. Lay the jack on its side and drain the fluid into a suitable container.

**Note:** Dispose of hydraulic oil in accordance with local regulations.

3. Fill with oil until just below the rim of the oil filler screw/plug hole. Reinstall the oil filler screw/plug.

### Lubrication

1. A periodic coating of light lubricating oil to pivot points, axles and hinges will help to prevent rust and assure that pump assemblies move freely.
2. When used on a daily basis, air pump should be internally lubricated before each use. Use **only** good quality air tool lubricant. If no inline oiler is used, pour a teaspoon of air tool oil into the inlet of the air control valve. Simply operate the jack using the air feature in order to fully distribute the oil.

### Cleaning

Periodically check the pump piston and ram for signs of rust or corrosion. Clean as needed and wipe with an oily cloth.

**Note:** Never use sandpaper or abrasive material on these surfaces!

### Storage

When not in use, store the jack with pump piston and ram fully retracted and air supply disconnected.

## TROUBLESHOOTING

Symptom	Possible Causes	Corrective Action
Jack will not lift load	<ul style="list-style-type: none"> <li>• Release valve not tightly closed.</li> <li>• Overload condition.</li> <li>• Air pressure inadequate.</li> </ul>	<ul style="list-style-type: none"> <li>• Ensure release valve tightly closed.</li> <li>• Remedy overload condition.</li> <li>• Ensure adequate air pressure.</li> </ul>
Jack will lift, but not maintain pressure	<ul style="list-style-type: none"> <li>• Release valve not tightly closed.</li> <li>• Overload condition.</li> <li>• Hydraulic unit malfunction.</li> </ul>	<ul style="list-style-type: none"> <li>• Ensure release valve tightly closed.</li> <li>• Remedy overload condition.</li> <li>• Contact Atd Tech. Service.</li> </ul>
Jack will not lower after unloading	<ul style="list-style-type: none"> <li>• Reservoir overfilled.</li> </ul>	<ul style="list-style-type: none"> <li>• Ensure load is removed, then drain fluid to proper level.</li> </ul>
Poor lift performance	<ul style="list-style-type: none"> <li>• Fluid level low.</li> <li>• Air trapped in system.</li> </ul>	<ul style="list-style-type: none"> <li>• Ensure proper fluid level.</li> <li>• With ram fully retracted, remove oil filler plug/screw to let pressurized air escape, then reinstall oil filler plug/screw.</li> </ul>
Will not lift to full extension	<ul style="list-style-type: none"> <li>• Fluid level low.</li> </ul>	<ul style="list-style-type: none"> <li>• Ensure proper fluid level.</li> </ul>

# REPLACEMENT PARTS

(refer to page 6 & 7)

Not all components of the jack are replacement items, but are illustrated as a convenient reference of parts location. When ordering parts, give part number and parts description. Call or write for current pricing: Atd Tools Inc. 160 Enterprise Drive, Wentzville, MO 63385. Tel:(636)327-9050 Fax:(636)327-9044

## Replacement Parts Illustration for model Atd-7412 & Atd-7420

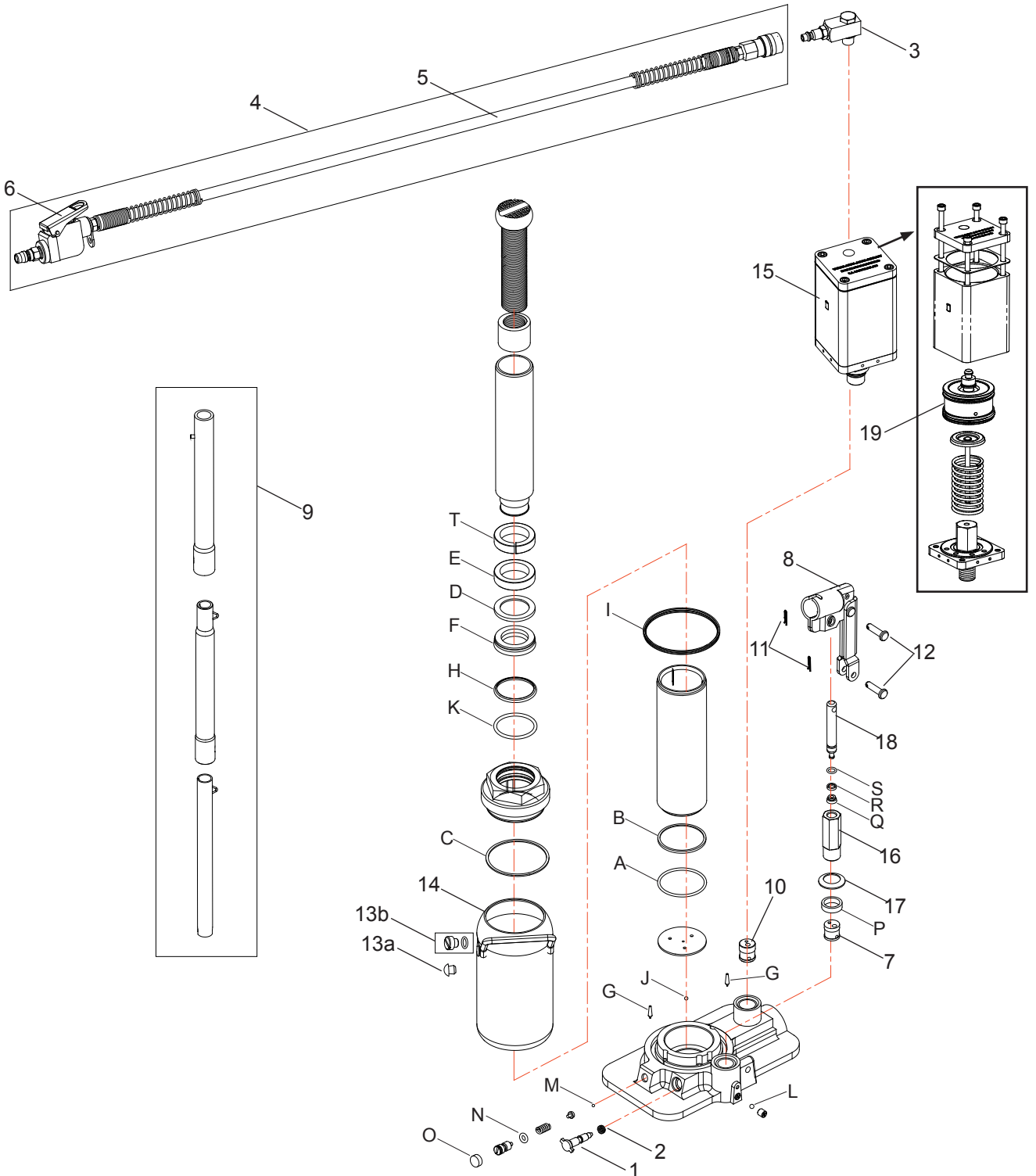


Figure 2 - Replacement Parts Illustration for Model Atd-7412 & Atd-7420

**Replacement Parts List for model Atd-7412 & Atd-7420**

Item	Part# for Atd-7412	Part# for Atd-7420	Description	Qty
1	A20060-0003	A20060-0003	Release Valve	1
2	A20060-0004	A20060-0004	O-ring	1
3	A27010-0002	A27010-0002	Air Inlet Swivel	1
4	A20060-0005	A20060-0005	Air Hose Assembly	1
5	A20060-0006	A20060-0006	Air Hose only	1
6	A20060-0007	A20060-0007	Control Valve	1
7	B20600-0001	B20600-0001	Hyd. Cartridge	1
8	A20060-0008	A20060-0008	Handle Socket	1
9	A20060-0001	A20060-0001	Handle Assy.	1
10	A20060-0009	A20060-0009	Hyd. Cartridge	1
11	F36100-0002	F36100-0002	Snap Pin	2
12	A20060-0010	A20060-0010	Pin	2
13a	F36100-0001	N/A	Filler Plug	1
13b	N/A	A20060-0002	Filler Screw	1
14	A24060-0002	A20060-0013	Reservoir	1
15	A27010-0001	A27010-0001	Air Motor	1
16	A20060-0011	A20060-0011	Pump Cylinder	1
17	B20600-0002	B20600-0002	Washer	1
18	A20060-0014	A20060-0014	Pump Piston	1
19	A270-01100-0000	A270-01100-0000	Piston, Air Motor	1
*	A24060-0000	A20060-0000	Seal Kit (includes 2,13 & A ~ T)	-
-	A27010-0000	A27010-0000	Seal Kit, Air Motor #15	-
-	ATD7412-L0	ATD7420-L0	Label (s)	1
-	ATD7412-M0	ATD7412-M0	Manual	1

**(\*) Seal Kit Contents:**

Item	Description	Qty
2	O-ring	1
13	Filler Plug/ Screw	1
A	O-ring	1
B	Back-up Ring	1
C	O-ring	1
D	Back-up Ring	1
E	Ram Bearing	1
F	U-cup	1
G	Filter	2
H	Dust Seal	1
I	Oil Seal	1

Item	Description	Qty
J	Steel Ball, D4	1
K	O-ring	1
L	Steel Ball, D5	1
M	Steel Ball, D3	1
N	Seal	1
O	Safety Valve Cap	1
P	U-seal	1
Q	U-cup	1
R	Back-up Ring	1
S	O-ring	1
T	O-ring (for Atd-7420 only)	1

